

Intergrated Multiplatform for Live Cell Imaging in a Core Research Facility

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Sydney Microscopy & Microanalysis (SMM) within Australian Centre for Microscopy & Microanalysis (ACMM) is one of the core research facilities in the University of Sydney. We provide access to state-of-the-art imaging systems across campus and offer research services to assist researchers with specialist applications.

Live cell imaging has become an important tool in cell biology studies, and many other related biomedical research disciplines. There are several key factors for performing successful live-cell imaging experiments: maintaining cells viability and functionality during high-speed and long-term imaging acquisition with high quality images.

Herein we provide an overview of the state-of-the-art live cell light / laser microscopes available at SMM. Currently we offer advanced wide-field, confocal, spinning disk confocal, Total Internal Reflection Fluorescence (TIRF), multiphoton, super-resolution microscopes with live cell capability. Related techniques also includes but not limited to Fluorescence Lifetime Imaging (FLIM), online spectral unmixing, calcium imaging. Micro-mirror array (DMD) module enables photoactivation and photoconversion.

In a core research facility, it is available to offer multiplatform method to match the goals for live cell investigation. We offer custom-made training schedule for each research project and high level of instrumental support.